

REMARKS

In response to the Office Action dated August 28, 2002, Applicant amends the application and requests reconsideration. In the Amendment, Claims 3-6 have been amended, Claim 7 has been added, and Claims 1 and 2 have been cancelled. No new matter has been added. Claims 3-7 are now pending and under examination.

New Claim 7 is an independent claim, and Applicant has amended Claims 3-6 so that they depend from Claim 7.

In the Office Action, Claims 1-6 were rejected as being anticipated by, or unpatentable over, three cited references. These rejections are rendered moot by the cancellation of Claims 1 and 2, the addition of Claim 7, and the amendments to Claims 3-6.

For the following reasons, Claim 7, as well as Claims 3-6, which depend from Claim 7, are patentable over the three cited references.

In Kazuhiko (JP 59054825 A), the surface of each separator plate has grooves (11), which extend in the radial direction to allow cooling oil to flow therethrough. Between two disk plates (16A, 16B), two grooved separator plates (1A, 1B) are arranged to form radially-extending oil channels (see Figs. 3 and 5).

Grooved separator plates, however, tend to create heat spots. Therefore, the grooved separator plates of Kazuhiko are not suitable for use with the claimed invention. As discussed in the specification of the present invention (page 2, lines 23-25), an object of the claimed invention is to inhibit occurrence of heat spots on separator plates. For this purpose, bearing stress on each separator plate (11) should be uniform (page 5, lines 11-16). To make bearing stress

uniform, the separator plates (11) should have smooth surfaces, such as groove-free surfaces. Further, a groove-free separator plate has a greater area of contact than a grooved separator of the same size. This greater area of contact can reduce bearing stress per unit area and, hence, contributes to the prevention of heat spots.

Therefore, the separator plates of the present invention, as shown in the drawings of the present application as recited in Claim 7, have no grooves on their surfaces.

In Ayers (US Patent 5,788,035), each separator plate (24) is a 3-layered composite plate. The two surface layers (24a, 24b) of the composite plate are made of a rigid material, preferably steel, while a middle layer (23c) is made of a material having viscous and elastic properties (column 4, lines 10-14 and 28-30). The separator plate (24), therefore, is constructed to reduce noises and vibrations (column 4, lines 8-9). The rigid surface layers (24a, 24b) are bonded with the middle layer (23c), so that the rigid surface layers (24a, 24b) are integral with each other (column 4, lines 31-34).

In the present invention as defined by new Claim 7, the plural groove-free separator plates, which are arranged between each two friction plates, are disposed separably from each other.

Mizobuchi (US Statutory Invention Registration H974) discloses a thrust bearing comprising a sintered ceramic disk with spiral grooves formed on a surface thereof, and does not disclose any multiplate clutch.


In view of the above discussion, Claims 3-7 are patentable over the three cited references.

In light of the foregoing remarks, this application is considered to be in condition for allowance, and early passage of this case to issue is respectfully requested. If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #280/50357).

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Respectfully submitted,



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VERSION WITH MARKINGS SHOWING CHANGES MADE

IN THE CLAIMS:

Claims 1 and 2 have been cancelled.

Claims 3-6 have been amended as follows:

3. (Amended) A wet multiplate clutch according to claim [1] 7, wherein between each two mutually-adjacent ones of said plural groove-free separator plates disposed between each two friction plates arranged adjacent to each other, a thin member is interposed.

4. (Amended) A wet multiplate clutch according to claim [1] 7, wherein each two mutually-adjacent ones of said plural groove-free separator plates disposed between each two friction plates arranged adjacent to each other have been coated at mutually-opposing surfaces thereof.

5. (Amended) A wet multiplate clutch according to claim [1] 7, wherein each two mutually-adjacent ones of said plural groove-free separator plates disposed between each two friction plates arranged adjacent to each other have been machined at mutually-opposing surfaces thereof.

6. (Amended) A wet multiplate clutch according to claim [1] 7, wherein said groove-free separator plates have a thickness of from 0.5 to 1.52 mm per plate.